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an action-oriented case study of factors supporting front end innovation

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SUMMARY

FRONT END INNOVATION
AN ACTION-ORIENTED CASE STUDY
OF FACTORS SUPPORTING FRONT END INNOVATION

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Ideas are the foundation for innovation. Continuous innovation therefore requires a targeted focus and support of the organisation's front end innovation (FEI). According to several authors, e.g. Reinertsen (1999), Dahl & Moreau (2002), Steven & Burly (2003), Boeddrich (2004) and Williams et al. (2007) an organisation benefits substantially by optimising and improving front end innovation actively and may thereby enhance the chances of developing innovations. Pharmaceutical innovation is unique, as it opposed to most other industries' product development is science-driven and not customer-driven. In addition, the pharmaceutical front end of innovation, as represented by research, lasts up to five years and the entire R&D process constitutes a period of 10-12 years, which is furthermore highly regulated by the external authority, The American Food and Drug Administration (FDA).

The research aim of this thesis has been: to contribute to the field of front end innovation by studying the factors supporting front end of innovation in theory, in practice and in action in a pharmaceutical company, H. Lundbeck A/S. The theoretical foundation is cross-paradigmatic and the following contributions were found in the literature study: 1) various innovation success factors are critical in supporting innovation, 2) the literature generally does not distinguish between factors supporting FEI and NPD, 3) the literature does not differentiate between trades and industries in relation to these factors, and 4) the choice between incremental and radical innovation affects the way to facilitate FEI. The academic contribution consists among others of a theoretical model, "The idea and innovation management house", that explains, which factors are critical in supporting pharmaceutical FEI and in what order the factors should be prioritised.

This study is one of the first action oriented studies of how to support pharmaceutical FEI. The empirical contributions and findings of the thesis underline that: 1) supporting FEI in practice in the pharmaceutical industry requires the promotion of specific factors, 2) the different organisational levels, seniority levels and geographies (headquarter/subsidiary) of the employee groups affect, which factors are the most important to support in practice, 3) the FEI process among the pharmaceutical companies are practically identical, and customers are not utilised directly in the pharmaceutical FEI, 4) Differences in national cultures influence the role of individuals and teams in FEI, 5) the level of structure and flexibility in the way FEI is carried out influence the level of exploration and radical innovation, 6) FEI can be improved in practice through mapping and implementation of targeted activities enhancing the identified factors and eliminating barriers of FEI, and 7) the leadership abilities and communication skills of the heads of departments determine the success and effects of implementing the targeted development activities. The practical contribution of the thesis is a guideline of how to support FEI in practice with recommendations of how to identify, implement and continuously support FEI through targeted innovation development activities and innovation action plans.